



**BRIEFING: SEPTEMBER 2012 BOARD MEETING AGENDA ITEM 8**

**TO:** Chairman Richard and Board Members

**FROM:** Jeff Morales, Chief Executive Officer

**DATE:** September 11, 2012

**RE:** Approval to issue Request for Qualifications for Project and Construction Management Services for Construction Package 1

## **1 Background**

This paper presents the plan for the procurement and implementation of project and construction management (PCM) services for on-site management of the design-build contracts and the scope of services to be included in the RFQ. As the program moves into the higher capital expenditure execution phase, the PCM role enhances the Authority's team on site to effectively manage multiple, multi-billion dollar contracts and the associated risks.

The acting CEO at the time was briefed on April 23, 2012 by the PMT, received input from the PMO, and after inclusion of comments and suggested changes, approved the following:

- the overall PCM implementation plan
- a draft PCM scope of services
- the development of the RFQ for those services
- the strategy to procure a separate PCM team for each design-build contract so that PCM expertise can be best matched to the particular scope of that design-build contract. For example, a PCM specializing in tunnel work will be selected for the contracts with major tunneling work, track experience will be matched to track work and core systems for core systems contracts, and so on
- the PMT will continue to provide the Authority with the overall program wide expertise and guidance, while ensuring management consistency across all PCM and DB contracts.

This approach is consistent with Industry standard approaches on mega projects and in particular on large design-build projects throughout the world. The inclusion of additional PCM firms also distributes the work of this enormous project across more firms and creates additional opportunities across the state.

### **1.1 Performance/Accountability methods**

The final Scope of Work that will be included in the RFQ and subsequent annual staffing plans will identify the level of staffing required to fulfill the scope of PCM services, which will evolve as the design-build contract moves from final design into construction. The staffing will match the DB contract progress and activities, contractor competencies and performance. Many tools and processes will be

mandatory to ensure prompt delivery and/or completion of tasks, including, but not limited to the following:

- Implementation of Proven QA/QC Internal processes
  - Intermittent Management Reviews by Qualified Authority Staff
- Monthly Progress Reports
- Monthly (and as required) Management Meetings
  - Including “Look-Ahead” Forecasting for Planning
  - Problem-Solving
- Invoice Retention of 10% Pending Work Task Order Milestone Delivery (A higher retention percentage may be implemented in certain situations to ensure accountability.)

## **2 Discussion**

### **2.1 Purpose of the Project and Construction Management Services (PCM)**

This is a brief to explain the plan to achieve technical and contractual compliance as the CHSR moves into the execution phase by a robust implementation of PCM services. The essence of the plan is to procure Project and Construction Management (PCM) services to represent the Authority on-site, to administer each individual Design-Build contract and to identify, manage and mitigate project risks. This is in accordance with the Design-Build Program Plan<sup>1</sup>, which addresses the requirement for “Construction Management” services<sup>2</sup>. The costs for these services are included in the overall capital cost estimate.

### **2.2 Roles and Responsibilities**

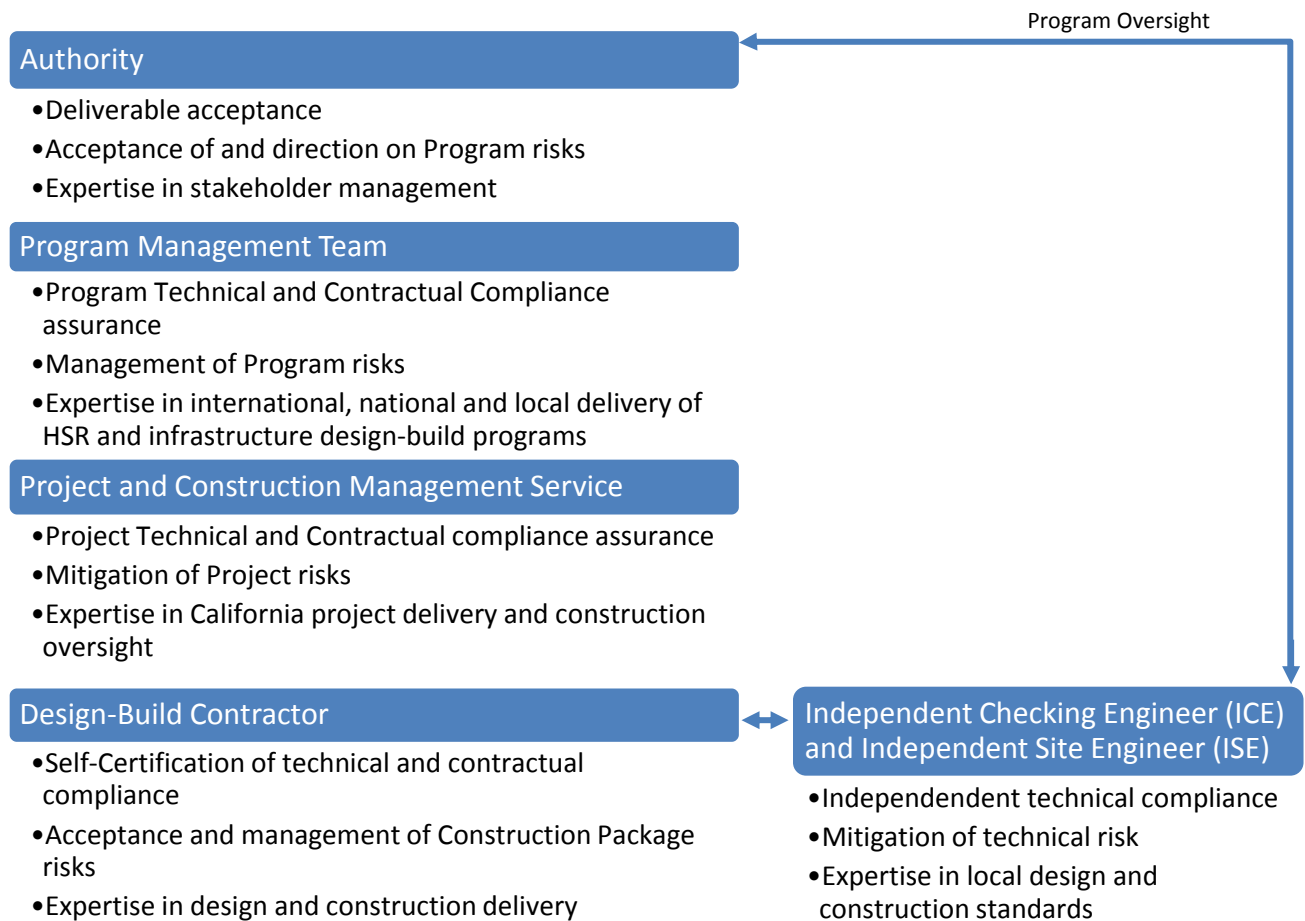
The PCM role enhances the Authority’s team to effectively manage multiple, multi-billion dollar contracts. The PCM provides the manpower and expertise to manage each Design-Build contract under the direction of the Authority and the PMT. The PCM is co-located with the Design-Build contractor. The PMT provides the program level framework, expertise and oversight to enable the PCM services as well as SBE and local participation in the delivery of the CHSR.

Each level of the organization has a distinct and complementary role to play in efficient and effective decision making by leveraging specific industry expertise. When taken as a whole, the expertise throughout the organization fulfills the staffing requirements to efficiently deliver the program. The following diagram illustrates the complementary entities, matched to the allocation of program and project risk and the core expertise at each level.

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<sup>1</sup> Approved by the Authority Board July 2011.

<sup>2</sup> The term ‘Project and Construction Management’ is a refinement of the term ‘Construction Management’, used in the Design-Build Program Plan. The PCM service is not a typical Construction Management organization as used in Design-Bid-Build contract delivery.



**Figure 1. CHSR entities, key responsibilities and expertise**

The PCM scope of services is written to ensure the work is completed by the design-builder and the PCM role is one of oversight and contractual compliance and contract administration. The risks assigned in the contract to the design-builder must be retained by the design-builder and not inadvertently assumed by any member of the Authority's team.

## 2.3 Summary Scope of PCM Services

As part of the delivery system and under the direction of the Authority and PMT, the scope of PCM services is to provide contract administration and assurance oversight for large design-build contracts. In outline the major scope items include the following:

- Design-Build management oversight
- Project Controls oversight and management
- Risk mitigation
- Contract administration
- Construction management oversight
- Quality management oversight
- Document control and processing
- Environmental compliance oversight and reporting

- Construction safety and security oversight
- Technical compliance oversight

The summary scope items below are further detailed in the RFQ document.

## 2.4 Design-Build Oversight

The Design-Builder is responsible for the design and construction of CP-01. The Independent Checking Engineer (ICE) and the Independent Site Engineer (ISE) are responsible for checking the Design Builder's technical submittals and subsequent construction activity<sup>3</sup>. The PCM provides oversight, administration, reporting, and recording services to the Authority and does not assume any of the roles assigned to the Design-Builder or ICE or ISE under the Design-Build Contract. This oversight will include:

- Design and construction oversight
- Monitoring of Design-Builder progress against plan
- Facilitating design and integration workshops
- Initiate and coordinate meetings and formal partnering workshops
- Ensuring adherence to Authority procedures for change control and configuration management
- Refining manuals and implementing procedures developed by the Authority (Non-Conformance Reports (NCR) and construction change orders, claims avoidance program, construction claims process etc).

**Communication/Meeting/Record Keeping.** As the primary point of contact for the Authority with Design-Builders, the PCM shall receive Design-Builder correspondence and control outgoing PCM/Authority correspondence pertaining to Design-Builder scope.

**Verification, Validation and Self-Certification.** A critical element of the overall program delivery is the Verification, Validation, and Self Certification process (V&V). The PCM shall follow the process and procedures developed by the Authority and PMT and refine as deemed appropriate by the PCM with Authority and PMT concurrence as appropriate.

**Quality.** The PCM shall perform quality oversight activities of the Design-Builder's QMS. The PCM shall monitor the performance of Design-Builder's adherence to quality requirements and procedures.

**Sustainability.** The PCM shall monitor and check the Design-Builder's sustainability initiatives and compliance with sustainability requirements.

**Safety and Security.** As well as safety and security oversight of the design-builders work, the PCM will develop and implement Construction Safety Training programs for Authority and PCM field staff. The PCM will be the Authority's representative for and coordinator of Authority construction safety and security activities.

**Alternative Technical Concepts (ATCs).** The PCM shall monitor and record the implementation of ATCs priced in the Design-Build Contract.

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<sup>3</sup> For more detail on the roles and responsibilities of the ICE and ISE see the Design-Build Contract, Verification, Validation and Self-Certification section in the Design-Build Contract

**Value Engineering Change Proposals.** The PCM shall review VECs for completeness and distribute for review. The PCM shall account for accepted VECs according to the terms of the Design-Build Contract and Authority procedures.

**Environmental Compliance.** Environmental compliance is critical to the success of the project. The Design-Builder is responsible for self-certifying compliance and the PCM shall provide assurance that the Design-Builder's reports are an accurate reflection of actual activities. The PCM shall check design reports from the Design-Builder and the ICE for compliance with the environmental mitigation measures and permit requirements.

**Hazardous Materials.** The PCM shall track, check, and report on Design-Builder activities in relation to the discovery, remediation, disposal of, and provisional sum administration of hazardous materials.

**Interface Management Activities.** The PCM shall review the Design-Builder's Interface Management Plan and team members' qualifications in consultation with the PMT and shall ensure that the Interface Coordination Team (ICT) workshops occur as planned and intended.

**Reliability, Availability, Maintainability, Safety (RAMS).** The PCM shall review the Design-Builder's RAM program plan for conformance with the CHSTP RAM Program objectives. All other RAMS submittals shall be reviewed for contract compliance by the PCM and distributed to the Program RAMS team for technical review.

**Right-of-Way.** As one of the key Authority deliverables to the design-builder the PCM shall work closely with the Authority's right-of-way team to coordinate information-sharing between all the parties. This coordination will include administering changes to the baseline right-of-way Acquisition Plan and monitoring and recording Design-Builder actions following a change in the Right-of-Way Acquisition Plan.

**Public Involvement.** The PCM shall provide oversight of Design-Builder Public Involvement Teams and provide personnel to support the Authority in community outreach, media, and public information efforts as directed by the Authority.

**Site Visits.** The PCM shall coordinate all site visits to the construction site with the Design-Builder and recommend on the site visit schedule in consultation with the Authority and PMT. The aim is to balance the burden of site visit administration on the Design-Builder with the requirement for comprehensive stakeholder engagement.

**Other Contracts.** The PCM shall provide coordination and oversight of the State Route 99 (SR-99) scope of work to be performed by Caltrans. The limits of the oversight activity will be defined in the Master Agreement between Caltrans and the Authority.  
Process,

**Procedures and Standards.** The PCM is an integral part of the delivery system and will work with the PMT to jointly refine and implement processes, procedure and standards. These are required to support the ability of the delivery system to make decisions based on accurate, precise and timely information. These standards will be reviewed, refined and improved as the program progresses and project

experience is incorporated. Industry best practice will continue to be used to drive the development and implementation of these process and procedures.

## **2.5 Project Controls**

As part of the Authority's management team the PCM will provide assurance that schedule and cost reporting by the contractor is substantially accurate. The PCM will be well placed to provide early warning of possible changes and their impacts on the design-builder's plan and the program.

**Integrated Management Information System (IMIS).** A critical element of the Program Governance model is an Integrated Management Information System that provides the organization with the ability to manage the program with transparent, real-time and relevant information.

The Integrated Management Information System will provide the as built data-set and all historical information that will enable future procurement activities and provide complete, clear and transparent information to investors, insurers and operations and maintenance organizations. The PCM will ensure that the relevant portions of the system are correctly and completely populated by the Design-Build contractors. The PCMs own systems and process shall be integrated with the information management systems to help critical information to be shared as quickly and completely as possible.

**Risk Assessment and Mitigation.** The PCM shall support the Authority in the risk management process. The PCM shall input into the elements of the Authority's Risk Register regarding the Design-Build Contract. The PCM shall track the progress and effectiveness of Project risk mitigation activities from the Design-Builder and its own activities.

**Document Control.** The PCM shall provide document control services to record, monitor, and track submittals between the Design-Builder and the Authority. All material developed and produced for the Authority under the contract for PCM Services shall belong exclusively to the State of California.

**Monthly Compliance Status Reports.** The PCM shall submit a monthly compliance report and supporting data to the Authority that reflects Design-Builder compliance to engineering standards, schedule compliance, quality of material and work, safety and security and other contractual related issues for the prior month. Significant work anticipated in the coming month shall also be reported.

The Design-Builder is responsible for project progress reporting whereas the Compliance Status report assesses the level to which the Design-Builder is compliant with the Design-Build Contract. Where the Design-Builder is not compliant, the PCM shall provide an assessment of the Design-Builder capability and plan of becoming compliant.

**Design-Builder Cost Accounting Process.** The PCM shall refine and implement cost accounting procedures that are compliant with Authority, State and FRA requirements and support the intent of the Design-Build Contract. The procedures shall enable the PCM to process and recommend the approval of the milestone payment applications that are allowable under the Design-Build Contract. The PCM shall administer the process regarding provisional sum entitlements in the Design-Build Contract.

## **2.6 Contract Management Support Services**

This section refers to the administration and management of the Design-Build Contract.

**Procurement.** The PCM shall provide a core team to help the Authority and the PMT review and evaluate Design-Builders' proposals to determine best value technical and price proposals. The PCM shall provide a narrative of review comments in an outline or other format as required by the Authority.

**Contract Management.** The PCM shall perform contract management services and shall serve as the primary point of contact for the respective Design-Builders. The PCM shall staff teams as necessary to be able to manage the contract and perform all required PCM tasks.

**Differing Site Conditions.** The PCM shall record, photograph, log and track all instances, proven or otherwise, of differing site conditions. The PCM shall respond and inspect the area on behalf of the Authority according to the timelines specified in the Design-Build Contract and shall make recommendations as to the course of action. The PCM shall check for accuracy, submission timeliness, review and recommend action on Contractor submitted reports regarding this section. The PCM may also be required to check and assess additional investigations conducted by the Design-Builder.

**Claims and Disputes.** The PCM shall take a proactive approach to claims avoidance. The PCM shall bring all potential claims to the attention of the Authority and provide recommendations regarding entitlement, potential exposure and strategies for resolution. PCM shall prepare documentation to support entitlement for all change order requests or claims from the Design-Builder that are determined appropriate for settlement after discussions with the Authority. The PCM shall maintain a Claims status log of all potential, current, and closed claims complete with time and cost estimates, relevant dates, and claims' relationships to other claims. The PCM shall coordinate the claims process from issue identification to resolution and close out.

**Labor and Sub Contract Compliance and SBE Reporting.** The PCM shall be responsible for checking the Design-Builder's prevailing wage and civil rights compliance records and reports for the Project. Prevailing wage compliance shall consist of certified payroll management, payment tracking. The labor compliance effort shall be closely coordinated with Authority's staff.

**Contract Closeout.** The PCM shall provide contract closeout assistance to the Authority on the Design-Build Contract in accordance with Authority approved procedures and in compliance with FRA guidelines.

**Utility and Railroad Coordination.** The PCM shall assist the PMT and Authority in utility and Railroad coordination efforts, including those necessary for utility relocations and new services, throughout the design and construction phases of the Project.

## **3 Recommendation**

Resolved: That the Board approves the issuance of a Request for Qualifications (RFQ) to procure a contract for Project and Construction Management services for the management of the CP-01 Design Build contract.